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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,444	11/20/2003	Gi Hyeong Do	9988.075.00-US	6634
36827 7590 03/05/2009 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				
EXAMINER				
GRAVINI, STEPHEN MICHAEL				
ART UNIT		PAPER NUMBER		
3743				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/716,444

**Applicant(s)**

DO, GI HYEONG

**Examiner**

Stephen M. Gravini

**Art Unit**

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-12 and 15 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Preliminary matters***

An appeals conference was held on February 19, 2009 and it was determined that the application is not yet ready for appeal. The conferees discussed that the claimed features of operating the exhaust fan drive signal might not be expressly disclosed in the secondary reference rejection the claimed invention.

It is noted that the arguments with respect to the outstanding restriction requirement is petitionable subject matter and not appropriate for appeal.

/Kenneth B Rinehart/

Supervisory Patent Examiner, Art Unit 3743

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 6-8, drawn to an apparatus combination, classified in class 34, subclass 595.
- II. Claims 9-12, drawn to a method, classified in class 34, subclass 495.
- III. Claim 15, drawn to an apparatus subcombination, classified in class 34, subclass 606.

The inventions are distinct, each from the other because of the following reasons:

Inventions of groups I & III and group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or

(2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another and materially different apparatus or by hand because the newly amended independently claimed process step of performing a drying procedure, wherein a motor, a heater and an exhaust fan are driven during the drying procedure are not limitations in any of the independently claimed apparatus groups.

Inventions of group I and group III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the group I combination is not limited by the particular independent group III claim step of sensing an internal temperature of a drying *and cooling* procedure and indicative of a drying *and cooling* procedure. The subcombination has separate utility such as cooling laundry dryer items wherein the combination is separately used for heat sensing only.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or

includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Amended claim 9 and newly submitted claim 15 directed to an invention that is independent or distinct from the invention originally claimed for the reasons set forth above. The amendment made to independent claim 9 is such that it would be a burden on the Office to examine the newly amended and claimed subject matter. However group II claims will be examined with group I claims in this action.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 15 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

This restriction requirement was made in an Office action mailed April 16, 2007.

***Claim Rejections - 35 USC § 103***

Claims 1-4, 6-9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sung (US 5,245,764) in view of Tachibana (JP 3-85200) in light of Tanaka et al. (US 5,388,348). The claims are reasonably and broadly construed, in light of the accompanying specification, to be disclosed by Sung and comprising:

a temperature sensor **6** for sensing an internal temperature of the laundry dryer and outputting a sensed temperature signal indicative of the internal temperature; and

a microcomputer **13** for controlling a plurality of drivers associated with a heater, motor and exhaust fan according to the sensed temperature signal from said temperature sensor, wherein said microcomputer stops the heater and the motor, thereby initiating a cooling procedure; or alternatively:

performing a drying procedure, wherein a motor, a heater and an exhaust fan are driven during the drying procedure at column 1 lines 13-41;

performing a cooling procedure, wherein the motor and heater are stopped during the cooling procedure at column 2 lines 9-21;

sensing an internal temperature of the laundry dryer during said cooling procedure step at column 3 lines 36-55;

comparing the sensed internal temperature with a predetermined temperature value also at column 3 lines 36-55; and

stopping said cooling procedure step if the sensed temperature is lower than a predetermined temperature at column 4 line 42 through column 8 line 18. Sung also discloses the claimed microcomputer controls the plurality of drivers by comparing the sensed internal temperature with a predetermined temperature value as shown on the face of that reference, wherein the predetermined temperature value corresponds to an internal temperature of 50°C at column 6 lines 37-51, wherein the sensed temperature signal indicates the internal temperature of the laundry dryer during the cooling procedure at column 1, wherein said microcomputer drives the exhaust fan during the

cooling procedure at column 5 lines 9-22, wherein the sensed temperature signal indicates the internal temperature of the laundry dryer after completion of a drying procedure at column 2 lines 41-52, wherein the heater, motor, and exhaust fan are driven during the drying procedure at column 3 lines 30-55 and column 4 line 41 through column 8 line 24, the drying procedure being completed before initiation of said cooling procedure step at column 5 lines 46-68, and the step of controlling a plurality of drivers associated with a the heater, motor, and the exhaust fan according to the sensed internal temperature signal at column 6 lines 10-68. Sung discloses the claimed invention, except for the claimed feature of operating the exhaust fan driver or driving the exhaust fan when the motor and heater are stopped. Tachibana, another clothes dryer, discloses that feature in the translated abstract. In addition, Tanaka, another reference cited in this action is commonly assigned to the entity of the Tachibana reference with a foreign filing date of about 3 years latter than that reference (Tachibana filed in 1989, while Tanaka filed in 1992 in Japan). At column 3 lines 54-68 of Tanaka and shown in figure 3, it discloses a microcomputer setting a counter and sending a driving signal to rotate a motor based on the microcomputer output. Tanaka further discloses the operation signal, or driver, is stopped after ten seconds, stopping the motor. The stopped motor inertia will continue to rotate the fan **36** such that it is driven when the motor and heater are stopped. The current application claimed "exhaust fan driver or driving the exhaust fan when the motor and heater are stopped" can be reasonably and broadly construed in light of the accompanying specification, to be disclosed in Tachibana in light of Tanaka, because the stream of teachings from the

common assignee of those reference disclose the claimed feature such that a drive signal of those references teach a cooling feature when the heater and motor is stopped to allow a fan with take heat out of a clothes drying machine. It would have been obvious to one skilled in the art to combine the teachings of Sung with the exhaust fan driving feature for the purpose of optimizing drying efficiency by minimizing energy input in the drying operation of clothing. Furthermore Sung in view of Tachibana discloses the claimed invention, as rejected above, except for the claimed internal temperature of 50°C. It would have been an obvious matter of design choice to recite the claimed specific internal temperature value, since the teachings of Sung would perform the invention as claimed regardless of the recited claim internal temperature value.

#### ***Double Patenting***

Claims 1-4 and 6-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,957,501 in view of claims 1-11 of U.S. Patent No. 6,775,923. Although the conflicting claims are not identical, they are not patentably distinct from each other because assignee's '501 patent, another laundry dryer, claims moisture measurement instead of sensing temperature, while assignee's '923 patent claims sensing temperature, as claimed in the present application. It would have been obvious to one skilled in the art to combine the patented moisture measurement with the patented temperature sensing for the purpose of cooling procedure laundry items within a drying environment to prevent damage to the articles to be dried.



***Response to Amendments***

Applicant's arguments have been fully considered but are moot based on the findings of the most recent appeals conference.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth B. Rinehart can be reached on 571 272 4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen Gravini/  
Primary Examiner, Art Unit 3743